Getting Around in a Large Nomenclature File: Browsing SNOMED International

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We have developed a means whereby we can easily browse a very large (≈ 30 MB) file of a nomenclature vocabulary. "SNOMED International - A Vocabulary of Human and Veterinary Medicine" is such a file and has been proposed to serve as the basis for controlled vocabularies. The College of American Pathologists developed the nomenclature and the American Veterinary Medical Association has adopted it as a coding and interchange system for diagnoses, problems, procedures, etc. The nomenclature is also being brought into the Universal Medical Language System (UMLS) project of the National Library of Medicine.

SNOMED International has 12 modules and contains over 120,000 medical terms. This implementation is an appropriate step toward a comprehensive consistent codified nomenclature suitable for computer information interchange. However, because of its size, the system, in its distributed form, is difficult to use (printed form), necessitating numerous "page flips" and other delaying tactics when searching for a specific term. The text files furnished with the machine readable form of SNOMED are in Standard Data Format (SDF) with no handler for display and searching. It is left to the user to provide any form of usable display of the data.

We have developed a "Viewer" for these large files using a commercial information publishing tool - Folio Views from the Folio Corp., Provo, UT. We wrote a program in Turbo Pascal (Borland International, Scotts Valley, CA) to place the various SDF files from the distribution CD-ROM into a format suitable for inclusion into Folio Views. Included in the display format are synonyms, SNOMED codes, ICD-9 codes and connections to other modules of SNOMED (i.e. morphology, topography, etc.). Each of the separate items is presented in a different color to make for easy identification.

The viewer allows easy searching for codes and/or terms of interest to the user via the "Query" option in Folio Views. Hypertext links applied to the secondary hierarchies allow the user to become acquainted with the multiple hierarchies provided by SNOMED. Other links could be provided in various other formats limited only by the needs and imagination of the users.

The browser/viewer which we demonstrate, can run under DOS, MS Windows and Macintosh operating systems. Each platform can access the same file on the network with the platform dependent viewer so that only one data file need be available for network users. With the search facility, we are able to easily find profession specific terms (i.e., veterinary, nursing, etc.) and to just as easily cycle through all the occurrences of a particular word, phrase or clause. Color coding allows the user to easily note if the selection is a preferred term or a synonym.

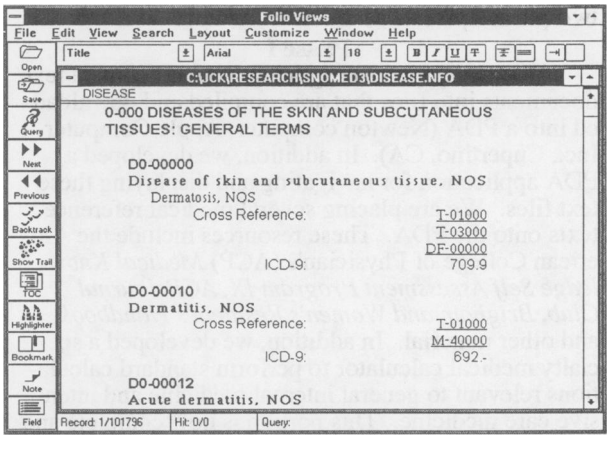

Figure 1 is a clip from the page display of the viewer.

We are using the system to develop a controlled vocabulary for our new electronic medical record currently under development and to assist in coding of diagnoses, problems, procedures, pharmaceuticals, etc. for importation and use.

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